

## 13. CONTRIBUTIONS TO THE FAUNA OF ROTTNEST ISLAND.

## No. IV.

## Western Australian Sepiidae.

By BERNARD C. COTTON, Assistant Conchologist, South Australian Museum.

(With one Text Fig. 17, and Three Plates, XIV., XV., and XVI.)

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By courtesy of the Trustees of the Western Australian Museum, its Curator, Mr. L. Glauert, forwarded for examination a large number of cuttle bones collected in Western Australia. Ten species belonging to seven genera have been recognised; five of these species have already been described by various authors, and five others are here described as new.

**Solitosepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb. 22, 1926, p. 188.

**S. glauerti** n. sp. Pl. XIV., figs. 3 and 4.

Sepion oval length about twice the width. Spine dorsally oblique, keeled ventrally. Dorsum cream-coloured, pustulose; three narrow ribs radiate from the spine, the central most distinct. Venter slightly swollen orally, median sulcus very shallow, striae semicircular. Outer cone thin, calcareous. Inner cone well developed.

Type.—50mm. long, 23mm. wide, 6mm. thick. Rottnest Island.

A specimen from Cottesloe measures 32.5mm. x 15.5mm. x 3.6mm.

Diagnosis.—It approaches *S. mestus* Gray, but this is larger and comparatively wider, and its spine does not point dorsally. Named after Mr. Ludwig Glauert, the Curator of the Western Australian Museum.

**S. hendryae** n. sp. Pl. XV., figs. 1 and 2.

Sepion narrow, pointed orally, length more than three times the width (some individuals comparatively narrower). Spine slightly concave ventrally, and obsolete keeled. Dorsum salmon-coloured, coarsely pustulose; three ribs radiate from the spine, lateral indistinct, central more prominent; chitinous edge obsolete at the oral eight. Venter swollen, median sulcus deep, extending to the oral tip; striae close set, produced to a median angle, which points orally. Outer cone thin, calcareous, extending in front of the spine. Inner cone prominent aborally, becoming indistinct orally.

Type.—77.5mm. long, 22.7mm. wide, 6.2mm. thick. Rottnest Island.

One specimen from Cottesloe measures 51mm. x 13.5mm. x 4.2mm., and another 76.5mm. x 24.2mm. x 7.3mm.

Diagnosis.—It differs from *S. plangon* Gray, the New South Wales species, in that (a) its outer cone extends in front of the spine in a calcareous, not corneous rim; (b) its oral end is more pointed; (c) its dorsum is

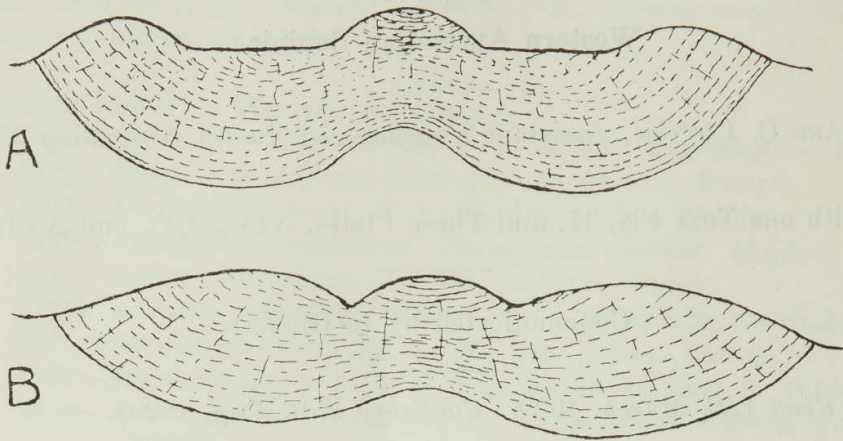


Fig. 17.

A *Solitosepia hendryae* n. sp.

B *Solitosepia plangon* (Gray).

more pustulose; (d) its transverse section shows on the dorsum a central rounded rib with a flat area on either side, and close to the margin a second rounded rib, less prominent than the central, as in A, fig. 17. In *S. plangon* the dorsum is as in B, fig. 17. This species is named after Miss M. E. Hendry, the authoress of a paper entitled "A Correlation of Recent and Sub-recent Marine Mollusca of the Swan River district."

*S. occidua* n. sp. Pl. XIV., figs. 1 and 2.

Sepion oval, length more than twice the width. Spine dorsally oblique, ventrally keeled. Dorsum rounded, finely pustulose; three indistinct sub-equal ribs radiate from the spine, the central cream-coloured, elsewhere (except the outer cone) pink. Chitinous margin passes narrowly in front of the spine. Venter slightly swollen, median sulcus reduced to a mere longitudinal groove; striae with a wide central loop and a much smaller one on either side. Outer cone thin, calcareous. Inner cone well defined.

Type.—48mm. long, 19mm. wide, 4.5mm. thick. Rottneest Island.

Specimens were also received from Cottesloe.

**Mesembrisepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb. 22, 1926, p. 190.

**M. novaehollandiae** (Hoyle).

1909. *Sepia novaehollandiae*, Hoyle, Pro. Roy. Physical Soc. Edn., xvii., p. 266.

Sepion elongately oval, length about three times the width. Spine strong, rounded, mounted on a callous base. Dorsum pink, gradually becoming cream-coloured laterally; three indistinct ribs radiate from the spine; finely pustulose, more coarsely in the area around the base of the spine. Venter swollen, thickest about one third the length from the oral end; median sulcus varying in depth; striae close-set and wavy. Outer cone fairly wide, calcareous. Inner cone well developed, longitudinally finely striate.



Type.—78mm. long, 30mm. wide. Kangaroo Is., S. Austr.

A large specimen from Cottesloe measured 150mm. x 45mm. x 15mm.

This appears to be the commonest and most variable species found in the Adelaidean region. Among hundreds of specimens from South and West Australia the numerous variants are not separable into any distinct varieties.

**M. chirotrema** (Berry).

1918. *Sepia chirotrema*, Berry, "Endeavour" Biol. Res., iv., p. 268, pl. lxxiv., figs. 3-9, pls. lxxv.-lxxvii.

Sepion elongately oval, about three times as long as broad. Spine strong, straight, rounded, dorsally oblique, mounted on a valid callous base. Dorsum cream-coloured, with a pink tinge in fresh specimens; three distinct ribs radiate from the base of the spine, the central most prominent; coarsely pustulose, pustules arranged in concentric lines corresponding with the lines of growth, and becoming coarser towards the aboral end, and finally agglomerating to form sharp ridges around the basal area of the spine. Chitinous margin, thick, wide, well-defined. Venter with a deep median sulcus extending to the last loculus; striae wavy, close-set. Outer cone wide, thickly calcified, extending in front of the spine. Inner cone well developed, longitudinally finely striate.

Type.—South of Kangaroo Is., South Australia. Dimensions not given.

Habitat.—Cottesloe and Rottneet Is. Largest specimen examined measures 145mm. x 42.5mm. x 13mm.

Diagnosis.—This is easily distinguishable from *M. novaehollandiae* (Hoyle) by the coarser sculpture of its dorsum, stronger spine, and deeper ventral sulcus. It is probably the deep water form of *M. novaehollandiae*, in which case it should be named *M. (novaehollandiae) chirotrema*, Hoyle.

**Glyptosepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb, 22, 1926, p. 191.

**G. hedleyi** (Berry). Pl. XVI., figs. 3 and 4.

1918. *Sepia hedleyi*, Berry, "Endeavour" Biol. Res., iv., p. 258, pl. lxxi.-lxxii.

Sepion elongate-oval, oral end attenuate and somewhat contracted laterally. Spine long, straight, keeled.

Dorsum pinkish-cream coloured, with a narrow raised central rib, obsolete in some specimens; pustulose, pustules fusing at the aboral end to form ridges; occasional transverse undulations correspond with the lines of growth. Venter slightly swollen, no median sulcus; striae close-set; almost straight transversely, turning abruptly aborally at both sides. Outer cone narrow, thin; inner cone very narrow.

Type.—South of Kangaroo Is., South Australia. Dimensions not given.

Habitat.—Cottesloe and Rottneet Is. Largest specimen measures 120mm x 41mm. x 11.5mm. The specimen illustrated measures 107mm. x 39mm. x 9mm.

**Decorisepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb. 22, 1926, p. 193.

**D. cottesloensis** n. sp. Pl. XVI., figs. 1 and 2.

Sepion elongate-oval, pointed orally, length more than twice the breadth. Spine rounded, dorsally oblique. Dorsum cream-coloured (outer cone bluish-white), finely pustulose; slightly raised narrow central rib, and wider in distinct lateral elevations; chitinous margin thin. Venter slightly swollen, median sulcus shallow, striae semi-circular, extending over rather less than two thirds the length of the shell. Outer cone thin, slightly calcareous, crossing in front of the spine; inner cone very narrow.

Type.—42.6mm. long, 18.3mm. wide, 4.5mm. thick. Cottesloe.

Only one specimen of this species was received.

Diagnosis.—It differs from *D. rex*, Iredale, in being wider, outer cone narrower aborally, dorsal surface cream-coloured and not deep rose.

**Arctosepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb. 22, 1926, p. 193.

**A. braggi** (Verco).

1907. *Sepia braggi*, Verco, Trans. Roy. Soc. S. Austr., xxi., p. 213, pl. xxvii., fig. 6.

Type.—60mm. long., 11mm. wide, 4.75mm. thick. Glenelg, South Australia.

A specimen from Cottesloe is 64.5mm. x 11mm. x 41.7mm. Common along the coast of South and South-West Australia.

**Amplisepia**, Iredale, Austr. Zoologist, iv., pt. 3, Feb. 22, 1926, p. 194.

**A. apama** (Gray).

1849. *Sepia apama*, Gray, Cot. Moll. Brit. Mus. (Cephalopoda), p. 103

1888. McCoy, Prod. Zool. Vict. Decade xix., pl. 188-190.

Type.—Port Adelaide, S. Australia.

McCoy, gives an exhaustive description. This common species varies considerably in shape and the comparative depth of the outer cone. The spine is comparatively insignificant in juveniles, and absent from adults. An example from Cottesloe measures 155mm. in length.

**Crumenasepia**, Iredale, Austr. Zoologist, iv., pt. 4, April 30, 1926, p. 239.

**C. ursulae** n. sp. Pl. xv., figs. 3 and 4.

Sepion elongate-oval, length nearly three times the breadth. Spine round, dorsally oblique, mounted on a callous base. Dorsum cream-coloured coarsely pustulose, pustules agglomerating aborally to form vermicular ridges; three indistinct ribs radiate from the base of the spine; chitinous margin thick, well defined, crossing in front of the spine. Venter slightly swollen, with a wide shallow median sulcus; striae close-set; striated area about half as long again as the unstriated area. Outer cone calcareous; inner cone chitinous, forming a pocket at the aboral end.



Type.—180mm. long, 65mm. wide, 13mm. thick. Cottesloe; also Rott-nest Is.

Every specimen examined is cracked about the aboral end, within the area enclosed by the corneous inner cone, probably due to the postmortem contraction of the latter.

Diagnosis.—It approaches *C. hulliana*, Iredale, from Howick Is., N. Queensland, but (a) its inner cone is longer and wider, and has its sides more nearly parallel, and a more rounded aboral end, (b) the striated area is narrower and shorted.

This species is named after Miss Ursula Glauert, who collected the type specimen.

The following species have been recorded from Western Australia, but no examples of them have been received from that State.

#### *Sepia indica* (d'Orbigny).

1839. *Sepia indica*. d'Orb., Ceph. Acet., p. 288, No. 21.

This Indian species was recorded from Western and North-Eastern Australia by Brazier. The corneous inner cone suggests its reference to the genus *Crumenasepia*, but its shape differs from that of *C. ursulae* described in this paper.

#### *Sepia irvingi* Meyer.

1909. *Sepia irvingi*, Meyer, Fauna Sudwest Austr. ii., p. 333, figs. 7-10

Type.—Cockburn Sound.

This is possibly a variant of *Mesembrisepia novaehollandiae* Hoyle.

#### *Sepia latimanus* Quoy & Gaimard.

1832. *Sepia latimanus*, Quoy & Gaimard, Zool. Voy. "Astrolabe," ii., p. 68, pl. ii., fig. 2.

1909. Meyer, Fauna Sudwest Austr., ii., p. 331.

Type.—New Guinea.

Meyer recorded this species from Shark Bay.

#### *Sepia galei* Meyer.

1909. *Sepia galei*, Meyer, Fauna Sudwest Austr., ii., p. 332, figs. 4, 5, 6,

The characters of this peculiarly shaped species render its reference to any described genus difficult.

#### *Sepia rostrata* d'Orbigny.

1826. *Sepia rostrata*, d'Orbigny, Ceph. Acet., p. 284, pl. 8, fig. 6.

1892. *Sepia rostrata*, Brazier Cat. Austr. Cephalopoda, p. 12.

d'Orbigny records it from Bombay and New Holland; Brazier from Western Australia. It is probably a species of *Acanthosepia*.

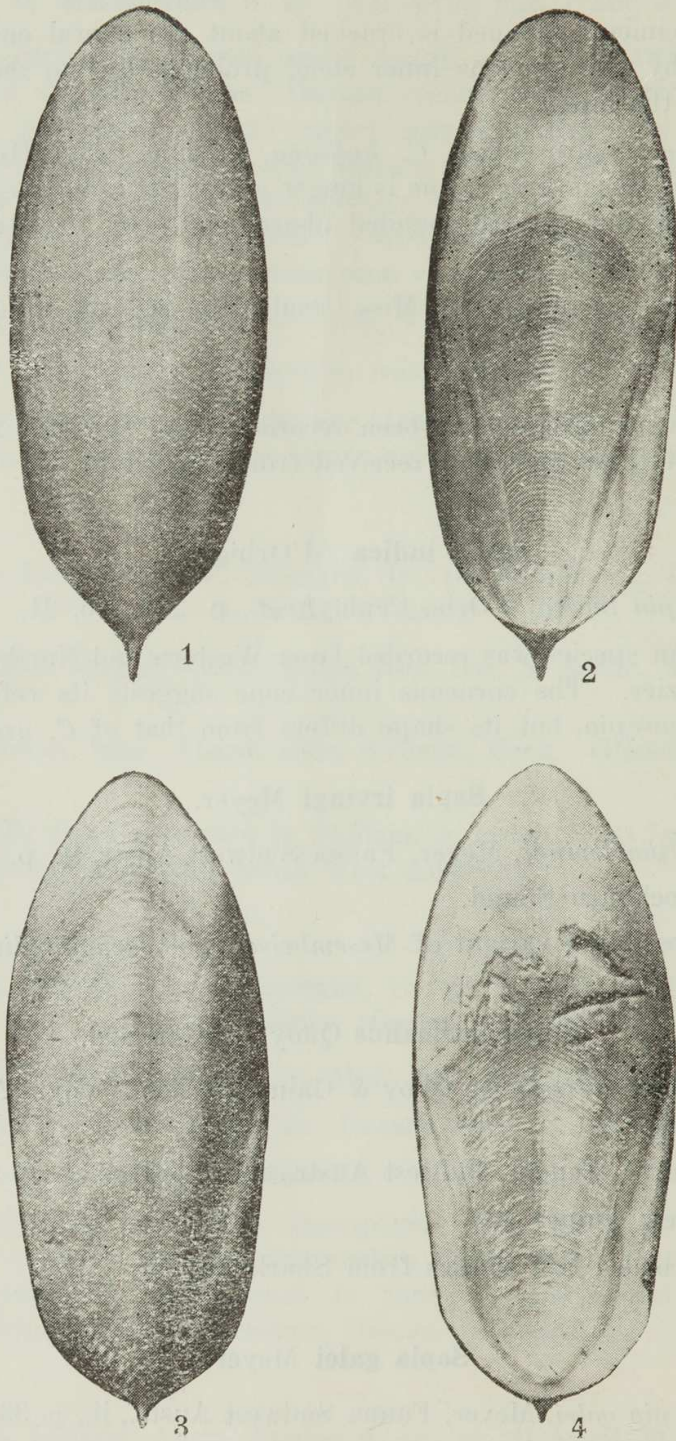


Plate XIV.

Figs. 1, 2.

*Solitosepia occidua* n. sp.

Figs. 3, 4.

*Solitosepia glauerti* n. sp.



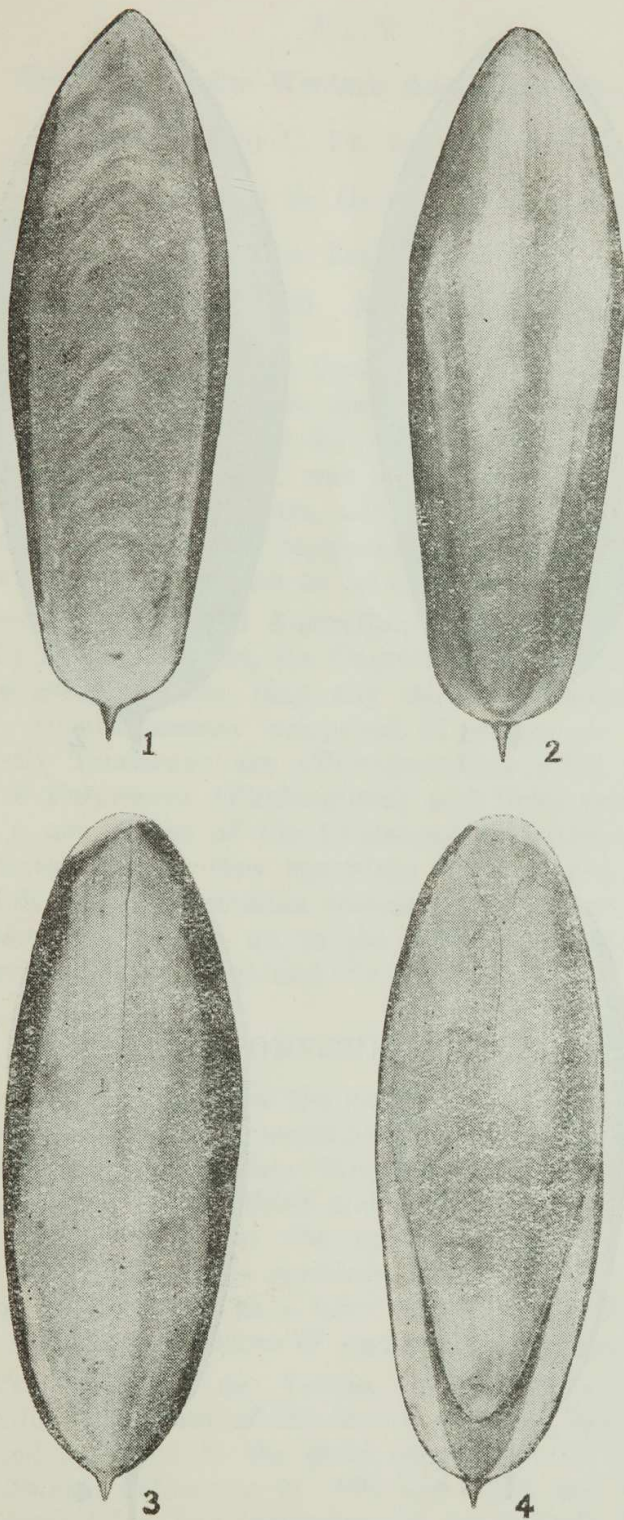


Plate XV.

Figs. 1, 2.

*Solitosepia hendryae* n. sp.

Figs. 3, 4.

*Crumenasepia ursulae* n. sp.

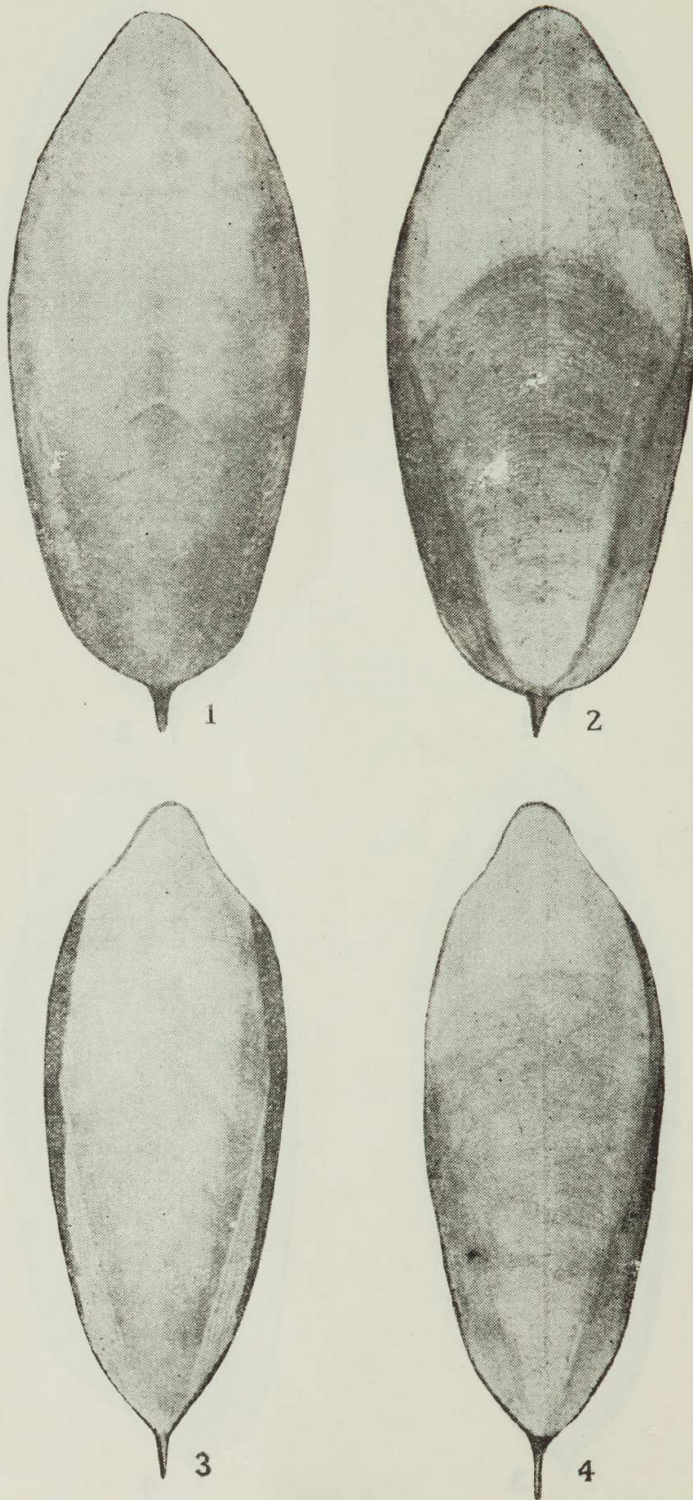


Plate XVI.

Figs. 1, 2.

*Decorisepia cottesloensis* n. sp.

Figs. 3, 4.

*Glyptosepia hedleyi* Berry.